Comparative Reproductive Events Of The Invasive Varnish Clam, *nuttallia obscurata*, And The Fisheries Littleneck Clam, *venerupis philippinarum*

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The Purple Varnish Clam (*Nuttallia obscurata*), a rapidly spreading introduced species in Washington, has invaded commercial fisheries beds of the Manila Clam (*Venerupis philippinarum*). Previous studies have described a predator avoidance for *N. obscurata* that allows for high adult survival. This study was conducted to investigate two aspects of population dynamics for *N. obscurata* and *V. philippinarum*; the duration of spawning events, and the occurrence of recruitment. Spawning was determined utilizing change in total lipid concentration. Recruitment events were monitored within multiple bays. Nuttallia obscurata displayed earlier spawning events, earlier recruitment events, and greater recruitment densities than *V. philippinarum*. There was temporal and spatial variability in recruitment events for *N. obscurata*, both between bays and within a single bay, consistently maintaining large populations on many beaches. *Nuttallia obscurata* recruitment did not appear limited by adult densities, while V. philippinarum adults are known to negatively impact recruitment success. Differential larval periods combined with high adult survival can provide an ecological advantage over spatially competitive species such as *V. philippinarum*. Although not currently considered a threat in U.S. waters, concerns about paralytic shellfish poisoning and the unpredictable nature of invasive species justify the consistent monitoring of *Nuttallia obscurata*.